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thereby a comparatively better ICI suppression as, for example, the Blackman window.

[0017] The number of pre-emphasized sub-carriers also basically can be extended to all sub-carriers, especially when the combination of doppler effect and phase noise is the limiting factor for the ICI.

[0018] Additional features and advantages of the present invention are described in, and will be apparent from, the following Detailed Description of the Invention and the Figures.

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BRIEF DESCRIPTION OF THE FIGURES

[0020] Figure 1 shows send-side modulation of OFDM symbols in accordance with the prior art.

[0021] Figure 2 shows send-side modulation of OFDM symbols in accordance with the inventive method.

[0022] *Figures 3a to 3c* show diagrams of a simulation with a typical pre-emphasis function as well as a typical set of parameters.

DETAILED DESCRIPTION OF THE INVENTION

[0023] Figure 1a shows a schematic diagram of the send-side modulation method in accordance with the prior art or the structure of the transmitter to execute this known method. According to the prior art, each symbol pulse $S_{d(k)}$ of a k th carrier f_k for N sub-carriers of a symbol carrier band of the bandwidth B is modulated; i.e., for each symbol pulse $S_{d(k)}$ for a time window of length T an Inverse Fast Fourier Transformation (IFFT) in accordance with the formula

$$S_{d(k)} = \sum_{n=0}^{N-1} S_{d(n)} e^{j2\pi \frac{n}{N} k}$$

is applied and from it an OFDM symbol $S_{d(k)}$ is generated. To counteract echoes and/or synchronization errors, this OFDM symbol $S_{d(k)}$ with duration T , through which the window length of a corresponding Fourier analysis in the receiver is also provided with a guard time (i.e., the time T will be extended by a time T_g) usually